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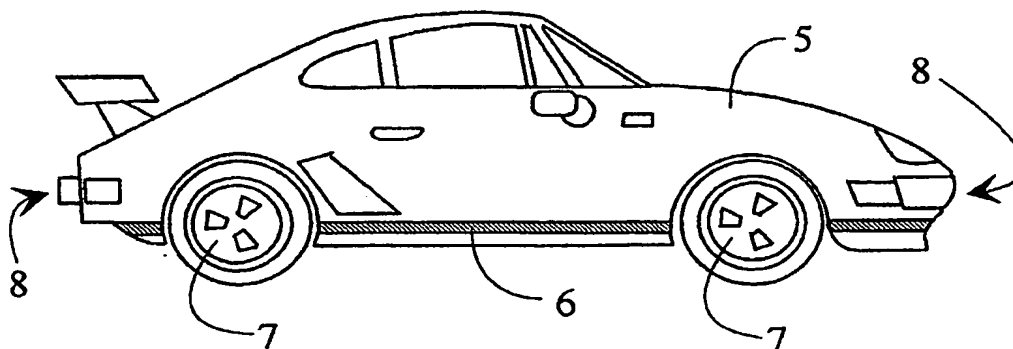
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Published:

— *With international search report.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **METHOD FOR ACQUIRING A CERTAIN PRODUCT, SUCH AS A CAR, THROUGH THE INTERNET**



(57) Abstract: A method for acquiring a certain product, associated with vehicles, such as a car, through the Internet, in which products include among others: colour of the car; motor assortment; tires and rims; interior, such as the upholstery of seats; decorative mouldings; design of dashboard and dials; shading of windcreens. The customer himself gets into contact with the Internet program of some car manufacturing company and designs and chooses the materials and colours by computer, after which the customer sends the data on the car he has designed to the file, i.e. to the order service of the car manufacturing company, the program of the car manufacturing company chooses the suitable production methods and process steps, by which the parts and surface patterns belonging to the car can be achieved and the company stores or sends the car designed by the customer to the car shop servicing the customer.



**WO 01/24075 A1**

## Method for acquiring a certain product, such as a car, through the Internet

The present invention relates to a method for acquiring a certain product, associated with vehicles, such as a car, through the Internet, which products include, among  
5 others:

- colour of the car
- motor assortment
- tires and rims
- interior, such as the upholstery of seats
- 10 - decorative mouldings
- design of dashboard and dials
- shading of windcreens.

In methods known *per se*, which enable ordering of different products through the  
15 Internet, one has to choose the desired products from a given assortment. Acquiring a car usually takes place in a car shop and by choosing from brochures.

The object of the present invention is to create a new method, by which the customer can design his car. Characteristic of the method according to the invention is that the customer himself gets into contact with the Internet program of some car  
20 manufacturing company and designs and chooses materials and colours by computer, after which the customer sends the data on the car he has designed to the file i.e. the order service of the company manufacturing the car, the program of the car manufacturing company chooses the suitable production methods and process steps, by which the parts and surface patterns can be achieved and the company stores or  
25 sends the car designed by the customer to the car shop servicing the customer.

The method is based on the simple solution that the program devised for digital control of predetermined work processes can be used also for designing the necessary products, which will thus be done by the customer.

This means that all process steps can be created digitally, i.e. a digital signal can be  
30 converted under control into the desired end product.

For example, the surface pattern of the dashboard can be transformed into DC-flow, a pulse, or the pneumatics can be controlled so that the surface pattern created by the customer and the measures can be carried out for example by cutting by laser, or

by IM-film when the product has been appropriately fitted at the so called work station, i.e. the 0-point of the product tallies with the 0-point of the digital file in the xyz-coordinate system.

Consequently, the method is totally new: the customer/user gets into contact with the file, i.e. the website of the car manufacturing company through the Internet on his own PC.

On the website the customer can use the program free of charge, which enables him to design the car in digital form on his own computer.

When the customer has made a design that he accepts using the program, i.e. the car corresponds to his intentions, he returns the pictures to the file of the manufacturing company and the manufacture can be started immediately.

The program created for this method is compatible both in terms of production and design and both the customer's design work and the control of the production are performed using one single program, where data is transmitted in digital form between the customer and the manufacturer through the Internet.

The program has been devised so as to allow design of such products alone that can be manufactured, i.e. it has been decided in advance what is to be manufactured, from which material and how the manufacture takes place, i.e. the working method (process). The program will thus only allow the design of a car that can be manufactured in the production process.

Since everything takes place in digital form, the design, the transmission from the Internet i.e. of the program and the completed design work, and the production, i.e. the control of the production, the finished car is always one hundred percent what the customer has ordered.

Different embodiments of the invention have been presented in the dependent claims of the set of claims.

Since the product segment is wider and since it is possible to affect the geometry of the part products, it is necessary to make a program package addressed to the customer so that it can be split into so called procedures, modems, whereupon one program segment always covers one product or upgrading method or similar. The customer can naturally take the whole package but it may be easier to take the necessary segments one by one. Otherwise the program itself can become too slow. Be-

sides, it is not possible to know beforehand, if the customer is going to design only the dashboard or all parts and colours of the car, which can be designed.

The customer can take the whole program or a part of it, whichever he thinks is best or he can use the direct Internet-connection, the so-called active direct line. In large  
5 complicated work, in which the capacity of one's own PC is not adequate, it can also be thought that the registered customer makes only a part of the work himself, gives instructions to the manufacturing company or an outsider and gets back the completed work, all naturally being under the item "customer's".

The program of the method both sets the customer limitations and gives him free-  
10 doms. The customer cannot without special permission affect the so-called prior art of the product, which means the technical constructions, technical structure or similar.

The program thus includes a so-called "construction (ccp) checking program", which ensures that the work performed meets the quality requirements. The program  
15 also inquires the object and the country, if this is not apparent from the contact information. However, the program is created such that the ccp always sees to that a defect product cannot be ordered. The ccp also informs this to the customer and proposes an improvement.

The program is also created such that it informs the durability of the material and  
20 other crucial information the customer should and is entitled to know.

The program can of course be made such that only creating material thickness and constructions exceeding certain minimum requirements is allowed.

The program thus also includes a ccp + state line, which stands for the orders of the authorities within the scope of the program for example by countries or in the EU.

25 Other restrictions of the program are always connected with the prior art and technical construction of the product, in which the customer thus cannot influence without the permission of the manufacturing company and does not brake the orders of the authorities, if it is a public commercial project.

In order to be able to use the program the customer commits to obey the regulations  
30 of the manufacturing company regarding the above-mentioned.

Technical and legal aspects have thus been taken into consideration in the program, which naturally sets limitations, and there are also production technological reasons,

which also set limits, but as a whole the customer has complete freedom concerning the surfaces, for example.

5 The main program of the design has naturally been created such that it is easy to use, i.e. the customer does not have to take stand on the production technology and the process itself, and not on the technical solutions either. The main program and the subprograms give the user free hands for design work without having to understand different techniques.

10 As it has been presented in daily newspapers, the Internet provides the customer with a program, by which it is possible to select a product from a catalogue but the products are always in their completed form. The customer cannot design his product himself, but he has to choose between the completed products available. In this respect the present invention differs from other known programs.

The production technique comprises the following methods:

#### **Lamination**

15 Lamination means that two materials or surfaces are joined together for example with glue, which usually means that both parts are otherwise ready before joining together.

#### **IM-film**

20 IM-film means joining together two materials or surfaces in the injection-moulding phase of plastic, i.e. both materials, the film itself and the injection-moulded component are of plastic.

IM-film remains a part of the product, which is usually printed, covered with metal or some other way manufactured before deep drawing/working up, before placing into the mould and injection-moulding phase (only plastic products).

#### **25 Transfer film**

Transfer film is basically the same as IM-film, but the pictures are transferred by means of a film to the desired product, but the plastic film itself is removed. Between the transferred picture and the plastic film itself there is a wax or some other removing material, which contributes to the loosening of the actual plastic film.  
30 Handling of transfer film usually requires heat.

**A. Coating methods**

1. Silver-plating (chemical coating with metal, silver)
2. Vacuum vaporization (metal, gas, other agents)
3. Coating with metal, chemical (glass + ceramics, firing)
- 5 4. Electrocatalytic coating (only for metals)
5. Ceramic coating (=glazing, enamelling)
6. Patination (chemical process)

**B. Methods of working** (always in 2d or 3d form)

1. Laser tooling/engraving
- 10 2. Manufacturing techniques of holograms (genuine + others)
3. Laser printer techniques
4. Colour/ink-jet printer techniques
5. Screen printing techniques
6. Air pressure/electrical spraying techniques
- 15 7. Piezo spraying techniques
8. Offset and other printing techniques
9. Mechanical milling/engraving
10. Laser or water cutting

**C. Methods of working** (processing of metal)

- 20 1. Edging techniques
2. Die-cutting/pressing techniques
3. Deep drawing/cam turning
4. Other processing of metal
5. Soldering, welding and other joining techniques for metal
- 25 6. Pressure/freecasting
7. Other known techniques

**D. Methods of working**

1. Transfer film, only the picture is transferred
2. IM-film, the film remains a part of the product with the picture
- 30 3. Lamination
4. Deep drawing/working up (plastic)

**E. Intermediate process steps**

1. Process itself directly to the work piece
2. Process indirectly performed on the work piece for example by transfer film.
3. A combination of the above-mentioned

5 The invention is explained below by means of an example and with reference to the accompanying drawing, in which

figure 1 illustrates a dashboard of a car,

figure 2 illustrates the seats of a car and

figure 3 illustrates a car.

10 By the Internet program the customer designs both parts inside and parts belonging to the exterior of the car. For example the material of the dashboard 1, 2 can be metal, plastic or even genuine wood. The coating can be selected from the above-mentioned production techniques. The upholstery of the seats 3, 4 can be selected from a vast assortment of fabrics or from an assortment of different colours and qualities of leather. The colour 5 of the car can be selected from a comprehensive  
15 colour map, which also includes metal and luster colour surfaces. Side mouldings 6 and their colours are freely selectable. Rims 7 of a car tire can be selected from a vast assortment and the coating from the above-mentioned production technique. Car bumpers 8 can also be selected either from the assortment or even be designed personally within certain limits. Even though the car motor is not included in the de-  
20 sign, it is, however, possible to choose a petrol engine or diesel engine of desired effect.

Internet has been utilized in the example presented above, but it is obvious that also other user interfaces known *per se* or future interfaces can be used.

## Claims

1. A method for acquiring a certain product associated with vehicles, such as a car, through the Internet, which products, among others include:

- 5 - colour of the car
- motor assortment
- tires and rims
- interior, such as the upholstery of seats
- decorative mouldings
- 10 - design of dashboard and dials
- shading of windscreens

**characterized** in that the customer himself gets into contact with the Internet program of some car manufacturing company and designs and chooses the materials and colours by computer, after which the customer sends the data on the car he has  
15 designed to the file, i.e. the order service of the car manufacturing company, the program of the car manufacturing company chooses the suitable production methods and process steps, by which the parts belonging to the car and the surface patterns can be achieved and the company stores or sends the car designed by the customer to the car shop servicing the customer.

20 2. A method according to claim 1, **characterized** in that the coating methods of the products include:

- a) chemical plating with metal, such as silver plating,
- b) plating with metal by vacuum vaporization,
- c) chemical plating with metal combined with glazing or plating with metal com-  
25 bined with glazing or ceramic plating and firing,
- d) ceramic plating.

3. A method according to claim 1 or 2, **characterized** in that the following methods or work belong to the working up and coating of the products:

- 30 a) laser machining/engraving,
- b) production technologies of holograms,
- c) laser printing techniques,
- d) colour/ink-jet techniques,
- e) screen printing techniques,



- f) piezo spraying techniques,
  - g) offset and other known printing techniques,
  - h) mechanical milling/engraving and grinding,
  - i) laser and water cutting and
  - 5 j) process with 2 or 3 shafts on a work table with striking tools for stone products.
4. A method according to any of the preceding claims, **characterized** in that the design and production process of the products is performed entirely in digital form.

1/1

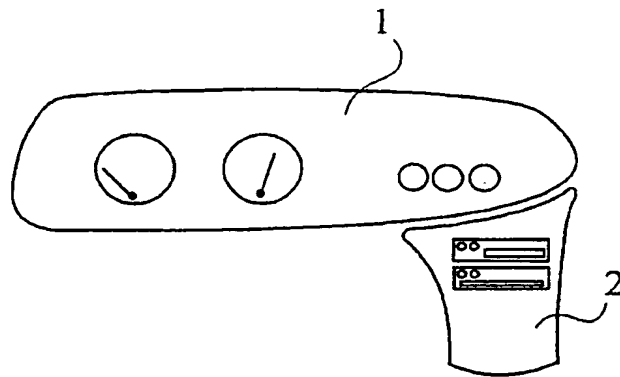


Fig.1

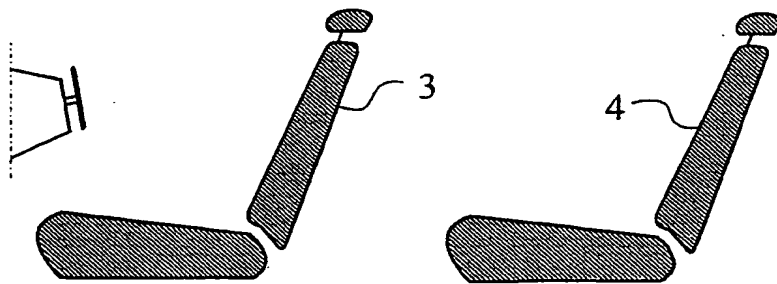


Fig.2

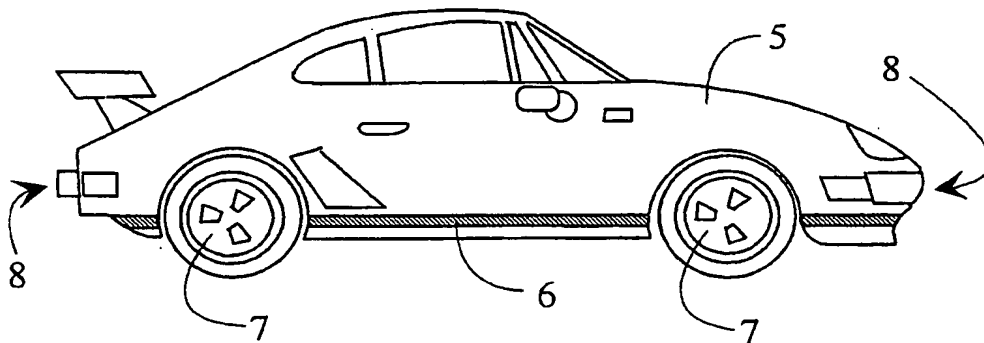


Fig.3

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 00/00844

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9852144 A1 (METROLOGIC INSTRUMENTS, INC.), 19 November 1998 (19.11.98), the whole document --	1-4
A	US 5570292 A (ABRAHAM ET AL.), 29 October 1996 (29.10.96), the whole document --	1-4
A	EP 0801355 A2 (BAKER HUGHES INCORPORATED), 15 October 1997 (15.10.97), the whole document --	1-4
A	WO 9815908 A1 (CITIZEN WATCH CO., LTD.), 16 April 1998 (16.04.98), the whole document -- -----	1-4

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

8 January 2001

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/FI00/00844

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-4  
because they relate to subject matter not required to be searched by this Authority, namely:  
.../...
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/FI00/00844

A method of doing business.

According to Rule 39 no search is required since the subject matter of the claimed invention concerns a method of doing business.

Despite this fact a search has been performed and thus a search report has been established.

**Information on patent family members**

International application No.

PCT/FI 00/00844

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
WO	9852144	A1	19/11/98	AU	7570098	A	08/12/98
				CN	1255217	T	31/05/00
				EP	0983570	A	08/03/00
				GB	2341251	A	08/03/00
				GB	9926738	D	00/00/00
				US	6085978	A	11/07/00
US	5570292	A	29/10/96	CA	2142484	A	15/08/95
EP	0801355	A2	15/10/97	JP	10063712	A	06/03/98
WO	9815908	A1	16/04/98	CN	1237255	A	01/12/99
				EP	1020807	A	19/07/00